

APPENDIX C

UNSUITABILITY AND MULTIPLE USE MANAGEMENT EVALUATION

Introduction

Factors determining land acceptability for coal leasing are capability assessment, application of unsuitability criteria, and an evaluation using multiple use management criteria. The Bureau of Land Management completed the capability assessment and by map and letter dated January 24, 1983 identified lands, 400,300 acres in Federal ownership within the Manti-LaSal National Forest boundary, containing mineable coal. The purpose of this appendix is to display the application of unsuitability criteria (43 CFR 3461.1) and multiple use management decisions (43 CFR 3420.1-3) to these lands. The application of unsuitability and Multiple Use Criteria determine suitability and lead to the clearance, elimination, and/or delay in leasing coal deposits. Clearance of coal lands for leasing does not preclude further evaluation on a site-specific basis of individual lease tracts or development activities.

Unsuitability Assessment

The 20 unsuitability criteria (Table C-1) defined in Federal Regulation (43 CFR 3461.1) were applied to the 400,300 acres identified as containing mineable coal. Seven of the unsuitability criteria do not apply because the criteria does not exist within these coal lands. Four more criteria were found not to be applicable after exceptions and exemptions were applied. Nine of the criteria were excepted or exempted insofar as leasing is concerned, but should be applied on a project by project basis, since they occur and may affect surface developments (see Table C-2).

TABLE C-1

UNSUITABILITY CRITERIA
FEDERAL REGULATION (43 CFR 3461.1)

C-2

CRITERION NUMBER 1 - All Federal lands included in the following land systems or categories shall be considered unsuitable: National Park System, National Wildlife Refuge System, National System of Trails, National Wilderness Preservation System, National Wild and Scenic Rivers System, National Recreation Areas, lands acquired with money derived from the Land and Water Conservation Fund, National Forests, and Federal lands in incorporated cities, town, and villages.

Exceptions - (i) A lease may be issued within the boundaries of any National Forest if the Secretary finds no significant recreational, timber, economic, or other values which may be incompatible with the lease; and (A) surface operations and impacts are incident to an underground coal mine, or (B) where the Secretary of Agriculture determines, with respect to lands which do not have significant forest cover within those National Forests west of the 100th Meridian, that surface mining may be in compliance with the Multiple-Use Sustained-Yield Act of 1960, the Federal Coal Leasing Amendments Act of 1976 and the Surface Mining Control and Reclamation Act of 1977.

(ii) A lease may be issued within the Custer National Forest with the consent of the Department of Agriculture as long no surface coal mining operations are permitted.

Exemptions - The application of this criterion to lands within the listed land systems and categories is subject to valid existing rights, and does not apply to surface coal mining operations existing on August 3, 1977. The application of the portion of this criterion applying to land proposed for inclusion in the listed systems does not apply to lands: To which substantial legal and financial commitments were made prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

CRITERION NUMBER 2 - Federal lands that are within rights-of-way or easements or within surface leases for residential, commercial, industrial, or other public purposes, on federally owned surface shall be considered unsuitable.

Exemptions - A lease may be issued, and mining operations approved, in such areas if the surface management agency determines that:

- (i) All or certain types of coal development (e.g., underground mining) will not interfere with the purpose of the right-of-way or easement; or
- (ii) The right-of-way or easement was granted for mining purposes; or
- (iii) The right-of-way or easement was issued for a purpose for which it is not being used; or

(iv) The parties involved in the right-of-way or easement agree, in writing, to leasing; or

(v) It is impractical to exclude such areas due to the location of coal and methods of mining and such areas or uses can be protected through appropriate stipulations.

Exemptions - This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

CRITERION NUMBER 3 - Federal lands affected by section 522(e) (4) and (5) of the Surface Mining Control and Reclamation Act of 1977 shall be considered unsuitable. This includes land within 100 feet of the outside line of the right-of-way of a public road or within 100 feet of a cemetery, or within 300 feet of any public building, school, church, community, or institutional building or public park or within 300 feet of an occupied dwelling.

Exceptions - A lease may be issued for lands:

- (i) Used as mine access roads or haulage roads that join the right-of-way for a public road;
- (ii) For which the Office of Surface Mining Reclamation and Enforcement has issued a permit to have public roads relocated;
- (iii) If, after public notice and opportunity for public hearing in the locality, a written finding is made by the authorized officer that the interests of the public and the landowners affected by mining within 100 feet of a public road will be protected.
- (iv) For which owners of occupied dwellings have given written permission to mine within 300 feet of their buildings.

Exemptions - The application of this criterion is subject to valid existing rights, and does not apply to surface coal mining operations existing on August 3, 1977.

CRITERION NUMBER 4 - Federal lands designated as wilderness study areas shall be considered unsuitable while under review by the Administration and the Congress for possible wilderness designation. For any Federal land which is to be leased or mined prior to completion of the wilderness inventory by the surface management agency, the environmental assessment or impact statement on the lease sale or mine plan shall consider whether the land possesses the characteristics of a wilderness study area. If the finding is affirmative,

the land shall be considered unsuitable, unless issuance of noncompetitive coal leases and mining on leases is authorized under the Wilderness Act and the Federal Land Policy and Management Act of 1976.

TABLE C-1 (Continued)

UNSUITABILITY CRITERIA
FEDERAL REGULATION (43 CFR 3461.1)

Council on Historic Preservation and State Historic

Exemptions - The application of this criterion to lands for which the Bureau of Land Management is the surface management agency and lands in designated wilderness areas in National Forests is subject to valid existing rights.

C-3

CRITERION NUMBER 5 - Scenic Federal lands designated by visual resource management analysis as Class I (an area of outstanding scenic quality or high visual sensitivity) but not currently on the National Register of Natural Landmarks shall be considered unsuitable. A lease may be issued if the surface management agency determines that surface coal mining operations will not significantly diminish or adversely affect the scenic quality of the designated area.

Exemptions - This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which included operations on which a permit has been issued.

CRITERION NUMBER 6 - Federal lands under permits by the surface management agency, and being used for scientific studies involving food or fiber production, natural resources, or technology demonstrations and experiments shall be considered unsuitable for the duration of the study, demonstration or experiment, except where mining could be conducted in such a way as to enhance or not jeopardize the purposes of the study, as determined by the surface management agency, or where the principal scientific user or agency gives written concurrence to all or certain methods of mining.

Exemptions - This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

CRITERION NUMBER 7 - All districts, sites, buildings, structures, and objects of historic, architectural, archeological, or cultural significance on Federal lands which are include in or eligible for inclusion in the National Register of Historic Places, and an appropriate buffer zone around the outside boundary of the designated property (to protect the inherent values of the property that make it eligible for listing in the National Register) as determined by the surface management agency, in consultation with the Advisory Council on Historic Preservation and the State Historic Preservation Office shall be considered unsuitable.

Exceptions - All or certain stipulated methods of coal mining may be allowed if the surface management agency determines, after consultation with the Advisory

Preservation Office that the direct and indirect affects of mining, as stipulated, on a property in or eligible for the National Register of Historic Places will not result in significant adverse impacts to the property.

Exemptions - The application of this criterion to a property listed in the National Register is subject to valid existing rights, and does not apply to surface coal mining operations existing on August 3, 1977. The application of the criterion to buffer zones and properties eligible for the National Register does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

CRITERION NUMBER 8 - Federal lands designated as natural areas or as National Natural Landmarks shall be considered unsuitable.

Exceptions - A lease may be issued and mining operation approved in an area or site if the surface management agency determines that:

(i) With the concurrence of the state, the area or site is of regional or local significance only;

(ii) The use of appropriate stipulated mining technology will result in no significant adverse impact to the area or site; or

(iii) The mining of the coal resource under appropriate stipulations will enhance information recovery (e.g., paleontological sites).

Exemptions - This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which includes operations on which a permit has been issued.

CRITERION NUMBER 9 - Federally designated critical habitat or threatened or endangered plant and animal species and habitat for Federal threatened or endangered species which is determined by the Fish and Wildlife Service and the surface management agency to be of essential value and where the presence of threatened or endangered species has been scientifically documented, shall be considered unsuitable.

Exceptions - A lease may be issued and mining

operations approved if, after consultation with the Fish and Wildlife Service, the Service determines that the proposed activity is not likely to jeopardize the continued existence of the listed species and/or its critical habitat.

TABLE C-1 (Continued)

UNSUITABILITY CRITERIA
FEDERAL REGULATION (43 CFR 3461.1)

Exemptions - This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

CRITERION NUMBER 10 - Federal lands containing habitat determined to be critical or essential for plant or animal species listed by a state pursuant to state law as endangered or threatened shall be considered unsuitable.

Exceptions - A lease may be issued and mine operations approved if, after consultation with the state, the surface management agency determines that the species will not be adversely affected by all or certain stipulated methods of coal mining.

Exemptions - This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

CRITERION NUMBER 11 - a bald or golden eagle nest or site on Federal lands that is determined to be active and an appropriate buffer zone of land around the nest site shall be considered unsuitable. Consideration of availability of habitat for prey species and of terrain shall be included in the determination of buffer zones. Buffer zones shall be determined in consultation with the Fish and Wildlife Service.

Exceptions - A lease may be issued if:

- (i) It can be conditioned in such a way, either in manner or period of operation, that eagles will not be disturbed during breeding season; or
- (ii) The surface management agency, with the concurrence of the Fish and Wildlife Service, determines that the golden eagle nest(s) will be moved.
- (iii) Buffer zones may be decreased if the surface management agency determines that the active eagle nests will not be adversely affected.

Exemptions - This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

CRITERION NUMBER 12 - Bald and golden eagle roost and concentration areas on Federal lands used during migration and wintering shall be considered unsuitable.

Exceptions - A lease may be issued if the surface management agency determines that all or certain stipulated methods of coal mining can be conducted in such a way, and during such periods of time, to ensure that eagles shall not be adversely disturbed.

Exemptions - This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

CRITERION NUMBER 13 - Federal lands containing a falcon (excluding kestrel) cliff nesting site with an active nest and a buffer zone of Federal land around the nest site shall be considered unsuitable. Consideration of availability of habitat for prey species and of terrain shall be included in the determination of buffer zones. Buffer zones shall be determined in consultation with the Fish and Wildlife Service.

Exceptions - A lease may be issued where the surface management agency, after consultation with the Fish and Wildlife Service, determines that all or certain stipulated methods of coal and mining will not adversely affect the falcon habitat during the periods when such habitat issued by the falcons.

Exemptions - This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

CRITERION NUMBER 14 - Federal lands which are high priority habitat for migratory bird species of high Federal interest on a regional or national basis, as determined jointly by the surface management agency and the Fish and Wildlife Service, shall be considered unsuitable.

Exceptions - A lease may be issued where the surface management agency, after consultation with the Fish and Wildlife Service, determines that all or certain stipulated methods of coal and mining will not adversely affect the migratory bird habitat during the periods when such habitat is used by the species.

Exemptions - This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

CRITERION NUMBER 15 - Federal lands which the surface management agency and the state jointly agree are fish and wildlife habitat for resident species of high interest to the state and which are essential for maintaining these priority wildlife species shall be

TABLE C-1 (Continued)

UNSUITABILITY CRITERIA
FEDERAL REGULATION (43 CFR 3461.1)

considered unsuitable. Examples of such lands which serve a critical function for the species involved include:

- (i) Active dancing and strutting grounds for sage grouse, sharp-tailed grouse and prairie chicken;
- (ii) Winter range most critical for deer and antelope, and elk; and
- (iii) Migration corridors for elk.

Exceptions - A lease may be issued if, after consultation with the state, the surface management agency determines that all or certain stipulated methods of coal mining will not have a significant long-term impact on the species being protected.

Exemptions - This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

CRITERION NUMBER 16 - Federal lands in riverine, coastal and special floodplains (100-year recurrence interval) on which the surface management agency determines that mining could not be undertaken without substantial threat of loss of life or property shall be considered unsuitable for all or certain stipulated methods of coal mining.

Exemptions - This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

CRITERION NUMBER 17 - Federal lands which have been committed by the surface management agency to use as municipal watersheds shall be considered unsuitable.

Exception - A lease may be issued where the surface management agency in consultation with the municipality (incorporated entity) or the responsible governmental unit determines, as a result of studies, that all or certain stipulated methods of coal mining will not adversely affect the watershed to any significant degree.

Exemptions - This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

CRITERION NUMBER 18 - Federal lands with National Resource Waters, as identified by states in their water quality management plans, and a buffer zone of Federal lands one-fourth mile from the other edge of the far banks of the water, shall be unsuitable.

Exceptions - The buffer zone may be eliminated or reduced in size where the surface management agency determines that it is not necessary to protect the National Resource Waters.

Exemptions - This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

CRITERION NUMBER 19 - Federal lands identified by the surface management agency, in consultation with the state in which they are located, as alluvial valley floors according to the definition in 3400.0-5(a) of this title, standards in 30 CFR Part 822, the final alluvial valley floor guidelines of the Office of Surface Mining Reclamation and Enforcement when published, and approved State Programs under the Surface Mining Control and Reclamation Act of 1977, where mining would interrupt, discontinue, or preclude farming, shall be considered unsuitable. Additionally, when mining Federal land outside an alluvial valley floor would materially damage the quantity or quality of water in surface or underground water systems that would supply alluvial valley floors, the land shall be considered unsuitable.

Exemptions - This criterion does not apply to lands: surface coal mining operations which produced coal in commercial quantities in the year preceding August 3, 1977; or which had obtained a permit to conduct surface coal mining operations.

CRITERION NUMBER 20 - Federal lands in a state to which is applicable a criterion (i) proposed by that state, and (ii) adopted by rulemaking by the Secretary, shall be considered suitable.

Exceptions - A lease may be issued when:

(i) Such criterion is adopted by the Secretary less than 6 months prior to the publication of the draft comprehensive land use plan or land use analysis, plan, or supplement to a comprehensive land use plan, for the area in which such land is included, or

(ii) After consultation with the state, the surface management agency determines that all or certain stipulated methods of coal mining will not adversely affect the value which the criterion would protect.

Exemptions - This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

TABLE C-2

APPLICATION OF UNSUITABILITY

	<u>Criteria</u>	<u>Application</u>			<u>Comments</u>
		<u>Not</u> <u>Applicable</u> (1)	<u>Not Applicable</u> <u>Excepted or</u> <u>Exempted</u> (2) (3)	<u>Applicable</u>	
C-6	1. Federal Lands, etc.		X		
	2. Rights-of-Way, Surface Leases, etc.			X	
	3. Rights-of-Way, Public Facilities, etc.			X	
	4. Wilderness Study Areas	X			No existing or proposed wilderness study areas within the coal lands.
	5. Class I Visual Quality Areas			X	
	6. Scientific Study Area			X	
	7. Cultural or Historical Resources			X	
	8. National Natural Landmarks	X			No landmarks have been designated presently, but future designations may be expected.
	9. Threatened and Endangered Species Sites			X	
	10. Threatened and Endangered Species Habitat			X	
	11. Bald and Golden Eagle Nests		X		
	12. Bald and Golden Eagle Roosts and Concentration Areas		X		
	13. Falcon Nesting Sites		X		
	14. High Priority Habitat (Migratory Birds)	X			
	15. High Interest Species Habitat			X	
	16. Riverine, Coastal and Floodplains			X	
	17. Municipal Watersheds	X			Local watersheds do not meet Municipal Watershed (USDI) criteria.
	18. Natural Resource Waters	X			No Natural Resource Waters within coal lands.
	19. Alluvial Valley Floors	X			No Alluvial Valley Floors within coal lands.
	20. State Criterion	X			UMC 762.11 a and b and UMC 762.12 do not list criteria applicable to these lands.

(1) Criteria found not applicable to any forest lands.

(2) Criteria found not applicable to any forest lands once exceptions and exemptions have been applied.

(3) Criteria found not applicable to forest lands but on a project specific basis, excepted and exempted for leasing.

Multiple-Use Management Decisions

Through the land Management Planning process, broad management decisions have been made that clear, eliminate, and/or delay coal land leasing. Coal lands within the Forest are in 8 unique areas (see Appendix F Map F-1) that do not follow surface resource management unit boundaries (see Land and Resource Management Plan Map in packet). Issues and/or resource thresholds were identified for the coal lease areas, and through multiple use evaluations, a conclusion was reached on the suitability of the areas for leasing. Table C-3 provides a list of the areas and their location, the issues and concerns related to lease actions, and the conclusions related to multiple use management.

TABLE C-3

COAL LEASE UNIT
MULTIPLE-USE EVALUATIONS

<u>Area Name and Location</u>	<u>Issues and Concerns</u>	and the proposed development activities related to leasing will not cause threshold to be exceeded.
1. <u>Pleasant Valley - Fish Creek</u> Includes that portion of the Forest within the Pleasant Valley and Fish Creek watershed.	1. Pollution at Scofield Reservoir exceeds Utah water quality standards (threshold).	2. This area will be available for further lease action consideration. Existing leases of Gentry Mountain are being mined mainly through portals on the eastern escarpment. Further lease actions utilizing Huntington Canyon for transportation and mine development not be delayed until it is determined that unacceptable impacts to existing resources would not occur.
2. <u>Huntington Canyon - Gentry Mountain</u> Includes that portion of the Forest within the Huntington River watershed, and a portion of the Price River watershed draining the east side of Gentry Mountain and Castle Valley Ridge.	2. Water quality, traffic, visual quality, and recreation thresholds. Increase current traffic levels will restrict traffic flows, interrupt wildlife movement and increase road kills.	3. This area will not be available for further coal lease action considerations order to maintain existing resources. The existing road through Straight Canyon will not be upgraded to accommodate heavy truck traffic due to presence of unstable canyon slopes.
3. <u>Joe's Valley Reservoir - Straight Canyon</u> Includes that portion of the Forest below the escarpment of North Horn and Trail Mountains in Straight Canyon and the Joe's Valley Recreation Complex.	3. Recreation, traffic, visual quality, and land instability thresholds. Present Straight Canyon Road is not adequate for heavy truck traffic.	4. This area will not be available for further coal lease action consideration until it is determined that any activity would not adversely affect the minimum viable population for management indicator species (deer and elk), cause undesirable community growth, or be incompatible with existing resource uses.
4. <u>Muddy Creek Drainage</u> Includes that portion of the Forest bound on the north by the drainage divide between Ferron and Muddy Creek, on the west by the unsuitable coal lands, on the south by the 39th latitude to Box Canyon, then follows the east escarpment of Box Canyon to Muddy Creek, and then the south escarpment of Muddy Creek to the Forest boundary.	4. Community infrastructure, growth, and Forest recreation opportunity spectrum level thresholds. Adequate coal deposit information. Potential deer and elk key winter range thresholds.	5. This area will not be available for further coal lease action consideration until adequate data is supplied to (a) show that leasing and mine development will be within standards and guidelines, (b) to determine impacts on the numerous seeps, springs, lakes, perched aquifers, and riparian areas, and (c) to show that leasing and mine development would not induce mass movements.
5. <u>Upper Bench</u> Includes that portion of the Forest on the bench between Joe's Valley Graben and Skyline Drive from Potter's Canyon south to the drainage between Ferron and Muddy Creek.	5. Potential hydrologic, land instability, visual quality, and recreation thresholds. Inadequate coal deposit information.	
<u>Conclusions</u>		
1. Further lease action considerations other than for supplying existing operations will be delayed until current impacts water quality have been mitigated		

TABLE C-3 (Continued)

COAL LEASE UNIT
MULTIPLE-USE EVALUATIONS

<u>Area Name and Location</u>	<u>Issues and Concerns</u>	<u>Conclusions</u>
<p>6. <u>Quitchoyah -Pines Area</u> Includes the Forest land on the north by the 39th latitude to Box Canyon, and then follows the escarpment of Box Canyon to Muddy Creek, and then the south escarpment of Muddy to the Forest boundary. The Forest boundary provided the other boundary of the area.</p> <p>7. <u>Mount Pleasant Ridge</u> Includes that portion of the Forest west of Skyline Drive, north of Pleasant Creek, and south of Crooked Creek.</p> <p>8. <u>Ferron Canyon, Cottonwood - Trail Mountains</u> Includes that portion of the Forest, South Horn, East, and Trail Mountains, Joe's Valley Graben south and north of the Muddy Creek watershed, excluding the Joe's Valley and Straight Canyon.</p>	<p>6. Deer and elk key winter range, community infrastructure, and growth threshold. Insufficient coal deposit information. Reduction in Forest planned recreational opportunity spectrum levels.</p> <p>7. Land instability water quality and quantity standards, and wildlife habitat thresholds.</p> <p>8. Deer and elk key winter range thresholds. Insufficient coal, geologic, and mine feasibility information.</p>	<p>6. One coal tract, that can be mined from southern and eastern escarpments (Quitchoyah Fork Creek, or Link Canyon), will be available for further coal lease action consideration. Base actions for the second tract will be delayed until the first been mined out when threshold levels capable of accommodating added mining.</p> <p>7. This area will not be available for further coal lease action consideration adequate supplies to show that leasing and mine development will be within standards and guidelines, and would not induce mass movements or adversely impact community water supplies.</p> <p>8. Coal lands other than in Joe's Valley Graben will be available for further lease action consideration. Prior to leasing, additional data extent, quality, and mining accessibility are needed to determine extent and configuration of leasing west of Joe's Valley Graben. Leasing activity will be limited to insure that any activity not adversely affect the minimum viable populations for management indicator. Presently, North Horn coal tract has been delineated and is suitable for leasing action.</p>

APPENDIX D

ENERGY TRANSPORTATION AND UTILITY CORRIDOR EVALUATION

Introduction

There is an increased concern at the National, State, and local levels for meeting future right-of-way needs while protecting the environment which led to this corridor evaluation as a part of the Forest Planning Process. The concern is founded upon a real demand for transportation and utility facilities- especially pipelines, electric transmission lines, and railroads-to transport energy from resource areas to the centers of consumption. This concern has led to legislation authorizing the Forest Service and other Federal land management agencies to designate transportation and utility corridors on Federal land.

Selecting routes for linear facilities on Federal lands is complicated by mixed ownership land patterns, conflicting land uses, and environmental and engineering constraints. The Manti-LaSal National Forest has evaluated and selected corridors by application of existing Forest Service Manual and Regional Guide direction for transportation and utility corridor planning.

Objectives of Corridor Evaluation

Identify and designate existing or potential energy transportation rights-of-way as corridors that:

1. Comply with evaluation criteria for determination of corridor suitability; and
2. Are desirable for retention, but not capable of further widening; and
3. Are desirable to retain and have widening potential for future uses.

Evaluation Criteria

Criteria considered in determining suitability of the inventoried rights-of-way for designation as corridors are as follows:

1. Routes are compatible with Federal, State, and local land use plans and ordinances.
2. Environmental impacts are acceptable or mitigable for;
 - a. Natural resources, including soil, water, fish, wildlife, vegetation, cultural resources, and visual quality.
 - b. Wetlands, flood plains, riparian areas, and other similar areas protected by law.
 - c. Threatened or endangered species or their habitats as protected by law.

3. Few, if any, physical effects and constraints on corridor placement or rights-of-way placed therein would exist due to geological landform instability.
4. Economic and energy efficiency is achieved by selecting a right-of-way within and existing corridor, before establishing a new or relocated corridor. Selection is based on considering costs of construction, operation, maintenance and cost to the environment of each location. This should lead to maximum acceptable use of existing transmission lines, pipelines, and transportation routes.
5. Potential health and safety hazards to National Forest users and the general public, resulting from facilities or activities within the right-of-way corridors, could be mitigated and/or minimized.
6. Existing and potential future facilities within the right-of-way would be technically compatible.
7. Reasonable mitigation would prevent unacceptable social and economic impacts to National Forest land users, adjacent landowners, and other groups or individuals.

General Assumptions

-The concerned counties and communities would support the Manti-LaSal National Forest corridor designations. Such counties and communities might not agree on corridor widths as specified on National Forest System lands and might, through negotiation and applicable authorizing actions, set different widths on county property, or within community boundaries.

-The State Department of Transportation and/or the Federal Highway Administration would approve of highway right-of-way encroachments proposed by those authorized to conduct the project.

-Most of the Forest Development Roads would be part of Avoidance or Exclusion Area designations.

-Where applicable, Manti-LaSal National Forest corridor designations would be in harmony with such designations on adjacent Bureau of Land Management (BLM) land.

-Energy transportation proposals and applications for locations outside of corridors (within avoidance areas) would be subject to possible denial, if mitigation measures could not provide for adequate protection of sensitive/critical resource values.

-Proposals and applications for locations within exclusion areas would be denied.

-Proposals and applications for locations within avoidance or unclassified areas would be evaluated on a case-by-case basis. Approval of proposals/applications with adequate mitigations may be possible from such evaluations.

Management Directions

General - Location which will be considered for designation as corridors are where existing rights-of-way for transmission lines over 66 KV, oil and gas or coal slurry pipelines 10 inches or larger, or combinations thereof, pass into or through National Forest System lands within an identifiable strip of land, and where the probability exists that other lines may be located within this strip. Inclusion of lower rated transmission lines or smaller pipelines within designated corridors would be permitted.

Before new corridors or widening of existing corridors are approved, consideration will be given to wheeling or multiple circuiting of transmission lines; and increasing pipeline capacity by addition of compressors or looping, or utilizing existing highway transportation rights-of-way. Federal, State, and Interstate Highway routes are considered as potential corridors for energy transportation facilities.

Specific - Generally where the purpose of the transportation, transmission, or pipeline route is to accommodate or service a particular end use on the Forest, the route followed is not considered as a potential corridor. Where existing rights-of-way pass into or through National Forest System lands, on an identifiable strip of land, and where the probability exists that other energy transportation systems may be located within the strip, it is considered for designation as a corridor.

Based on the most current planning information from utility and power administrations, the Manti-LaSal National Forest has directed planning for future utility rights-of-way and associated corridors by:

1. Designating

- a. Corridors - These are linear strips of land which have ecological, technical, economic, social, or similar advantages over other areas for the present or future location of energy transportation or utility rights-of-way within their boundaries.
- b. Windows - Critical segments of terrain through which rights-of-way could pass in traversing from points of origin to destination.
- c. Rights-of-Way - Land authorized to be used or occupied for the construction, operation, maintenance, and the terminus of a project facility passing over, upon, under, or through such land.

2. Identifying constrained areas where future utility rights-of-way will be discouraged or denied.

- a. Avoidance Areas - Areas that pose particular environmental impacts which would be difficult or impossible to mitigate; or areas that have characteristics which impose unusual engineering constraints. Applications for linear rights-of-way within avoidance areas would be processed by the Forest if, after project evaluation, it was determined that proposed mitigation measures would meet the Standards and Guidelines for the various resources within the areas.
- b. Exclusion Areas - Areas where linear facilities would not be legally permitted to cross. Applications for linear rights-of-way within exclusion areas would not be processed, due to the statutory prohibitions applicable to the area in question.

3. Identifying Unclassified Areas

- a. Unclassified Area - an area where potential environmental impacts have not been qualified or quantified. Linear facilities could pass through the area if environmental evaluation established adequate mitigation measures.

Process

The process for applying the Service-wide and Regional direction for energy transportation and utility corridor planning are to (listed in planning sequence):

01. Inventory and field check existing pipelines, electric transmission lines, and major transportation routes which are located on the Forest; (Transportation routes are inventoried as potential corridors for electrical transmission and pipeline facilities, not for expansion of or addition to the State/Interstate Road/Highway System).
2. Identify criteria which will be used to evaluate potential corridors;
3. Analyze suitability of routes or areas to handle new or additional facilities and the suitability of the routes or areas for overhead vs. underground vs. surface linear right-of-way facilities;
4. Evaluate and designate areas suitable for corridors on the Manti-LaSal National Forest within the land management planning process;
5. Consolidate right-of-way alignments into designated corridors to avoid the proliferation of separate linear rights-of-way.
6. Identification/evaluation of land areas where facilities may not or will not be placed, by classifying the areas as avoidance areas or exclusion areas.
7. Combination of the above to; (a) identify, evaluate, and designate important right-of-way areas; and (b) identify, evaluate, and designate areas exhibiting important natural, cultural, and social values.

Inventory

The following is a descriptive inventory of rights-of-way, windows, exclusion areas, and avoidance areas. They are shown on the Energy Transportation and Utility Corridor Maps, Appendix F.

Existing Rights-of-Way

Electrical transmission lines, gas pipelines, and Federal, State and Interstate Highway rights-of-way currently existing on the Manti-LaSal National Forest that meet standards for potential corridor designation are displayed in Tables D-1 and D-2 respectively. (No rights-of-way exist on the Forest for railroads).

Planning Windows

An inventory of the Forest indicates there are no areas that qualify as planning windows.

D-4

Exclusion Areas

The following areas have been identified as exclusion areas:

1. Research Natural Areas
 - Elk Knolls
 - Nelson Mountain (Proposed)
 - Mount Peale (Proposed)
 - Cliff Dwellers Pasture (Proposed)
2. Great Basin Experimental Range
3. Scenic, Wilderness, and Recreation Areas
 - Dark Canyon Wilderness Area
 - Straight Canyon & Joe's Valley Recreation Area
 - Ferron Reservoir Recreation Area
 - Huntington Canyon Recreation Area
 - Hammond Canyon Archeological and Scenic Area

TABLE D-1

EXISTING ELECTRICAL AND GAS TRANSMISSION LINES

Name	Location Beginning-Ending	Size	R/W Width (Feet)	Length (Miles)	Acres
a. Huntington-Mona UP&L	Begins at the Huntington Power Plant west of Huntington and	345-KV	120	18.0 miles	212

ends at Mona Station near Nephi, Utah. Crosses the Manti Division between Huntington and Fairview, Utah. Crosses the Sanpitch Division in Chalk Creek.

b. Thistle-Mona Deseret Generation and Trans- mission	Crosses the Manti Division near Thistle, Utah.	345-KV	150	0.6 miles	10
c. Rattlesnake Paradox	Crosses the Moab Ranger District between old and new LaSal, Utah	46-KV	40	5.7 miles	27
d. Price-Provo Natural Gas Line	Crosses Manti Division between Clear Creek and Indianola Communities.	18/20 inch	60	14.4 miles	112

TABLE D-2

EXISTING FEDERAL, STATE, AND INTERSTATE HIGHWAYS

Name	Location	R/W Width (Feet)	Length (Miles)	Acres
a. U.S., Highway 191	Crosses Monticello Ranger District between Monticello and Blanding at Devils Canyon.	132	0.6	10
b. State Highway U-29	Crosses Manti Division via Straight-Seeley and Ephraim Canyons	100/200	37.0	654
c. State Highway U-31	Crosses Manti Division via Huntington and Fairview (Cottonwood) Canyon.	132	33.4	590
d. State Highway U-46/C-90	Crosses Moab District between new and old LaSal.	132	2.2	35
e. State Highway U-96	Begins at Scofield and joins U-31 at Fairview Summit.	175	12.9	275

Avoidance Areas

The geographical areas identified as avoidance areas are as follows:

1. West slope of the Manti Division (Indianola to Mayfield front) owing to slope instability.
2. Cedar Knoll of the Manti Division, owing to slope instability.
3. Upper Fish Creek owing to municipal water supply, National Recreation Trail, and Semiprimitive Recreation Management Unit Requirements.
4. Candland Mountain, owing to National Recreation Trail and Semiprimitive Recreation Management Unit Requirements.
5. Grassy Flat-Mary's Lake Bench owing to Semiprimitive Recreation Management Unit Requirements.

6. Little Bear area, owing to Semiprimitive Recreation Management Unit Requirements and municipal watersheds.
7. PL-566 watershed areas, owing to land instability with sensitive and fragile soils.
8. Manti Division east escarpment, owing to rapture nesting habitat.
9. West slope of San Pitch Division, owing to slope instability.
10. LaSal Peaks, owing to being a part of the National Parks viewshed.
11. Sinbad-Carpenter Ridge, owing to high scenic values.

12. Blue Mountain, owing to municipal watersheds being a part of National Park viewsheds, and recreational values.
13. Arch and Texas Canyons, owing to high scenic values, and archaeologic values.
14. The south-central part of the Monticello Ranger District, because of the generally high-site density (archeological values.).
15. Clay Bank-White Knoll area, owing to slope instability.
16. Flat Canyon Recreation Area.

Unclassified Areas

These unclassified areas are National Forest System lands that are not identified as part of the potential corridors and/or exclusion and avoidance areas.

Evaluation

Each right-of-way route (the right-of-way and terrain immediately adjacent to the right-of-way window and avoidance area) was evaluated by the seven criteria to determine the effect of corridor designation and eventual right-of-way use. This analysis is shown on Table D-3 through D-4.

TABLE D-3

EVALUATION PROCESS

Rights-of-Way (Electrical Transmission Lines and Gas Pipelines)

Paradox Price-Provo Evaluation Criteria 18/20 Inch Gas Pipeline	Huntington-Mona 345 KV Transmission Line	Thistle-Mona 354 KV Transmission Line	Rattlesnake- 69 KV Transmission Line
1. Compatible with Federal, State, and Local Land Use/Management Plans	No Conflict	No Conflict	No Conflict
2. Environmental Impacts Natural Resources a. Soils/Vegetation b. Water Quality c. Fish/Wildlife d. Cultural e. Visuals/Recreation	a. Soils/Vegetation. Shallow soils; would be difficult to revegetate (applies to eastern slope). Moderately high erosion potential. e. Visuals/Recreation. Near Upper Joes Valley and Indian Creek Campground. Highly visible from U.S. 89 in Sanpete Valley. No major Conflicts	Soils/Vegetation. Low soil moisture. Clay sub- soils could cause revegeta- tion problems. e. Visuals/Recreation. Highly visible from U.S. 89 in Thistle Canyon. No major Conflicts Known habitat for Astragalus desereticus.	a. Soils/Vegetation. Shallow, rocky soils exist to the southeast of the route. d. Cultural. Historic values exist along por- tions of this route. e. Visuals/Recreation Highly visible from SR 46. No Major Conflicts No Known Conflicts
Wetlands, Flood Plains, Riparian Areas	Known eagle habitat.		
Threatened or Endangered		D-8	

No Conflict

a. Soils/Vegetation
High erosion
potential on west
slopes; difficult to
revegetate disturbed
sites.

Visuals/Recreation
Highly visible from
portions of Skyline
Drive
and at Indianola.

Wetlands in Upper
Goose-
berry.

Known eagle
habitat.
Potential habitat for
Astragalus
desereticus
along north end.

TABLE D-3 (Continued)

Price-Provo Evaluation Criteria 18/20 Inch Gas Pipeline	Huntington-Mona 345 KV Transmission Line	Thistle-Mona 354 KV Transmission Line	Rattlesnake-Paradox 69 KV Transmission Line
3. Geological Landform Restrictions	4. Economic and energy efficiency of constructing, operating, and maintaining ROW and costs of modify-ing or	relocating existing facilities in a proposed corridor. 5. Potential health and safety hazards to National	Forest users and general public. 6. New and existing uses would be technologically 7. Socio-economic effects to adjacent

landowners and other groups or individuals.	Slumps and sides on western slope. Steep topography along most of route.	Some steep terrain east of the route.	No Major Problems	Steep side slopes show instability and movement along west half of route. Steep ridge lines on west slope.
		No Major Problems	No Major Problems	
	High construction costs along most of route. Difficult access for maintenance.			Identified land stability problems are presently causing high maintenance costs and would require high first construction costs for new facilities.
		No Major Problems	No Major Problems	
	No Major Problem			No Major Problems
		No Major Problems	No Major Problems	
				No Major Problems
	Above listed natural and physical restrictions could limit the compatibility of new uses with existing uses, except for upgrading proposals.	Decision to expand ROW width would affect adjacent private landowners.	Decision to expand ROW width would affect adjacent private landowners.	Decision to expand ROW width would affect adjacent private landowners, since ROW passes near to or through some private land.
	Expansion of ROW could adversely affect recreation user perception of the Upper Joes Valley Recreation area.			

D-9

TABLE D-4

EVALUATION PROCESS
(Roads and Highways)

				State
Highway Evaluation Criteria U-46/C-90	U.S. Highway 191 State Highway U-96	State Highway U-29	State Highway U-31	

1. Compatible with Federal State, and local Land Use/ Management Plans.	Approval and coordination would be required by State Department of Transportation (DOT) during planning, design, construction, and maintenance work for utilities and other energy transportation facilities within the road ROW. Forest Service would also have to review and approve use.	Approval and coordination would be required by State Department of Transportation (DOT) during planning, design, construction, and maintenance work for utilities and other energy transportation facilities within the road ROW. Forest Service would also have to review and approve use. Proposals outside ROW would conflict with exclusion and avoidance area designations for the area being crossed (80 to 90 percent of route is within exclusion and avoidance areas).	Approval and coordination would be required by State Department of Transportation (DOT) during planning, design, construction, and maintenance work for utilities and other energy transportation facilities within the road ROW. Forest Service would also have to review and approve use. Proposals outside ROW would conflict with exclusion and avoidance area designations for the area being crossed (80 to 90 percent of route is within exclusion and avoidance areas).	Approval and coordination would be required by State Department of Transportation (DOT) during planning, design, construction, and maintenance work for utilities and other energy transportation facilities within the road ROW. Forest Service would also have to review and approve use.
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ent of Transportation (DOT) during planning, design, construction, and maintenance work for utilities and other energy transportation facilities within the road ROW. Forest Service would also have to review and approve use.

Proposals outside ROW would conflict with exclusion and avoidance area designations for the area being crossed (80 to 90 percent of route is within exclusion and avoidance areas).

TABLE D-4 (Continued)

				State
Highway Evaluation Criteria U-46/C-90	U.S. Highway 191 State Highway U-96	State Highway U-29	State Highway U-31	
			Utility proposal would conflict with Huntington Canyon Recreation Plan, which emphasizes protection of visuals and recreation values adjacent to the highway.	
2. Environmental Impacts				
Natural Resources				
a. Soils/Vegetation		a. Soils/Vegetation.	a. Soils/Vegetation.	
b. Water Quality		Shallow soils; would be difficult to re-vegetate (applies to total road length).	Shallow soils on west slopes. Moderately high erosion potential.	
c. Fish/Wildlife		Moderately high erosion potential.	Difficult to revegetate disturbed sites.	
d. Cultural				
e. Visuals/Recreation				
NOTE:				
A "no entry" for a particular ROW indicates that no major effects exist or would be anticipated.				
		b. Water Quality.	b. Water Quality.	
		Eastern quarter of route parallels Straight Canyon watershed area. Western quarter of route within Ephraim Watershed.	Two-thirds of route within sensitive watersheds, i.e., Huntington and Fair-view Canyons.	
		c. Fish/Wildlife.	c. Fish/Wildlife.	
		Parallels trout fishery for 25 percent of length.	Parallels trout fishery for 25 percent of length.	

NOTE:

A "no entry" for a particular ROW indicates that no major effects exist or would be anticipated.

ver most of route. Moderate erosion potential. Difficult to revegetate disturbed sites.

b. Water Quality.
Within a watershed area tributary to Scofield Reservoir.

c. Fish/Wildlife.
Parallels trout fishery for 25 percent of length.

TABLE D-4 (Continued)

Highway Evaluation Criteria U-46/C-90	State			
	U.S. Highway 191 State Highway U-96	State Highway U-29	State Highway U-31	
	d. Visuals/Recreation Major travel route to the Southeastern Utah National Parks and Monuments. Crosses near Devils Canyon Campground.	d. Visuals/Recreation Crosses through Straight Canyon and Joes Valley Recreation Area. High scenic values along total length of route. Crosses over Skyline Drive Road.	d. Visuals/Recreation Crosses through Huntington Canyon Recreation Area. High scenic values along total length of route. Crosses over Skyline Drive Road.	
Wetlands, Flood Plains, and Riparian Areas	No Major Conflicts	Flood plains and riparian areas along 25 percent of route length.	Flood plains and riparian areas along 50 percent of route length.	No Major Conflicts
Threatened or Endangered Species and Habitat	No known conflicts with T&E animals.	No known conflicts with T&E animals	No known conflicts with T&E animals.	No known conflicts with T&E animals
3. Geological Landform Restrictions	Heavy rock cut within Forest.	Narrow, steep walled restrictive canyon on east side. Unstable slopes west of Joes Valley Reservoir.	Unstable slopes along western portion of route. Narrow canyon bottom along eastern portion of route.	No Major Problems
4. Economic and energy efficiency of constructing, operating, and maintaining ROW and costs of modifying or relocating existing facilities in a proposed corridor.	No Major Problems	High Construction cost to mitigate environmental resource values.	High Construction cost to mitigate environmental resource values.	No Major Problems

Road.

Flood plains and riparian areas along 25 percent of route length.

No known conflicts with T&E animals.

Unstable landforms along western half of route.
Narrow canyon with steep side slopes along eastern half of route.

High construction costs to mitigate environmental resource values.

TABLE D-4 (Continued)

Highway Evaluation Criteria U-46/C-90	State			
	U.S. Highway 191 State Highway U-96	State Highway U-29	State Highway U-31	
5. Potential health and safety hazards to National Forest users and general public.	No Major Problems	No Major Problems	No Major Problems	No Major Problems
6. New and existing uses would be technologically compatible.	No Major Problems	Above listed natural and physical restrictions could limit the compatibility of new uses with the existing road ROW.	Above listed natural and physical restrictions could limit the compatibility of new uses with the existing road ROW.	No Major Problems
7. Socio-economic effects to adjacent landowners and other groups or individuals.	Decision to expand ROW width would affect adjacent private landowners.	Expansion of ROW could adversely affect recreation user perception of the Upper Joes Valley Recreation Area.	Expansion of ROW could adversely affect recreation user perception of the Upper Joes Valley Recreation Area.	Decision to expand ROW width would affect adjacent private landowners.

ical restrictions could limit the compatibility of new uses with the existing road ROW.

Eastern portion would traverse through the Skyline Mine development. Expansion of ROW could adversely affect Upper Huntington Canyon recreation use.

Decision to expand ROW width would affect adjacent private landowners.

D-13

Recommendations

Corridors

The narratives on corridor designations, including widths and type of rights-of-way, address the recommended designation for existing electrical transmission line and gas pipeline routes, and State Road/Highway routes.

ELECTRICAL TRANSMISSION LINE AND GAS PIPELINE ROUTES

Huntington-Mona 345 KV Transmission Line - Support corridor designation.

Suitable for overhead and underground electrical transmission and underground pipeline facilities.

Upgrading, upgrading, or replacing existing facilities, or addition to new facilities would only be permitted within the existing ROW width.

Thistle-Mona 345 KV Transmission Line - Support corridor designation.

Suitable for overhead and underground electrical transmission and underground pipeline facilities.

The width of the corridor on National Forest System lands to the east would be subject to visual and slope restrictions, and would vary from 200 to 500 feet, inclusive of existing 150-foot transmission line right-of-way.

Rattlesnake-Paradox 69 KV Transmission Line - Support corridor designation.

Suitable for overhead and underground electrical transmission and underground pipeline facilities.

Expansion or widening would be limited to 400 feet, inclusive of the existing 40-foot transmission line right-of-way and 132-foot State Highway U-46/C-90 right-of-way.

Price-Provo 18/20-Inch Gas Pipeline - Support corridor designation.

Suitable for underground pipeline facilities.

Expansion or widening would vary from 200 to 500 feet, inclusive of the existing 50-foot pipeline right-of-way.

ROADS AND HIGHWAYS

U.S. Highway 191 - The Manti-LaSal National Forest highway portion is located within the Monticello Unit - LaSal Division, an Unclassified Area. Proposals for overhead, underground, and over-the-surface energy facilities (within or contiguous to this right-of-way) would be discouraged due to the proximity of an existing north/south utility right-of-way located to the east of National Forest system lands.

State Highway U-29 - The Manti-LaSal National Forest road portions are located within the Joe's Valley Recreation Exclusion Area and Clay Bank-White Knoll and West Slope - Manti Division Avoidance Areas.

D-14

Proposals for overhead, underground, and over-the-surface facilities within or contiguous to this right-of-way would conflict with the direction for the important recreation and visual resources located in the adjacent exclusion area. The proposals would also adversely affect land stability within the avoidance areas. Energy transportation proposals along and/or contiguous to the road portions would be denied

State Highway U-31 - The Manti-LaSal National Forest road portions are located in the Huntington Canyon Exclusion Area and the West Slope - Manti Division Avoidance Area.

The above statement for U-29 would also apply to this road location.

State Highway U-46/C-90 - Refer to previous statement on the Rattlesnake-Paradox 69 KV transmission line corridor designation.

State Highway U-96 - The Manti-LaSal National Forest road portions are located within the Flat Canyon Recreation and West Slope - Manti Division Avoidance Areas.

The above statements for U-29 would also apply to this road location.

Avoidance Areas

Application of the 7 Evaluation Criteria to the 16 areas listed above led to the following general statements concerning corridor designations in avoidance areas:

Most (and in some cases all) locations within these areas would conflict with or not meet the goals and objectives for any one criterion; and reasonable mitigation would (for the most part) not prevent unacceptable impacts to natural, physical, or social resources and values located within and adjacent to the areas.

NOTE: The Manti Division has State Highway and Roads within avoidance areas that meet the "Management Requirements" for potential energy transportation and utility corridor designation. The above statements for avoidance areas would also apply to these highway/road locations.

With the exception of the Mountain Fuel Price to Provo gas pipeline, there are no other linear rights-of-way within the avoidance areas that meet the established Management Requirements.

D-15

APPENDIX E

GLOSSARY

ACCELERATED EROSION - Erosion much more rapid than normal or natural erosion, primarily as a result of the influence of the activities of man or in some cases, of animals or natural catastrophes that expose soil surfaces, for example, fire.

ACRE EQUIVALENT - The area affected by a wildlife improvement, i.e., a water development creates habitat for big game in the 640 acres surrounding the development.

ACRE-FOOT - A measure of water or sediment volume equal to the amount which would cover an area of 1 acre to a depth of 1 foot (325,851 gallons).

ACTIVITY - The work processes or management practices that are conducted to produce, enhance, or maintain outputs or achieve administrative and environmental quality objectives (FSM 1309, Management Information Handbook). An activity can generate multiple outputs.

ACTIVITY FUELS - Woody debris generated from any activity on the Forest such as firewood gathering, precommercial thinning, timber harvesting, and road construction, which increases fire potential.

ACTUAL USE - The actual occupancy of land and utilization of forage by livestock. Report grazing use of range actually made. Includes grazing under both grazing permits and livestock use permits.

AFFECTED ENVIRONMENT - The biological, physical, and social environment usually under the administration of one line officer, such as District Ranger or Forest Supervisor, that would be affected by an activity or action.

AIRSHED - A geographic area that, because of topography, meteorology, and climate, shares the same air. As applied to the National Forest by the Clean Air Act, amended August 1977, the term covers all wilderness areas larger than 5,000 acres that were in existence as of August 1977.

ALLOWABLE SALE QUANTITY (ASQ) - The quantity of timber that may be sold from the area of suitable land covered by the Forest Plan for a time period specified by the Plan. This quantity is usually expressed on an annual basis as the "average annual allowable sale quantity."

ANALYSIS OF THE MANAGEMENT SITUATION (AMS) - A determination of the ability of the planning area to supply goods and services in response to society's demand for those goods and services.

ANIMAL UNIT - A measurement of livestock numbers based on the equivalent of a mature cow (approximately 1,000 pounds live weight).

ANIMAL UNIT MONTH (AUM) - The amount of forage required by an animal unit for 1 month.

APPROPRIATE SUPPRESSION RESPONSE - The kind, amount, and timing of suppression action on a wildfire which most efficiently meets fire management direction under current and expected burning conditions. It may range in objective from prompt control to confinement.

AQUATIC ECOSYSTEMS - The physical environment of or pertaining to water-stream channel, lake or pond bed, wetland, water itself-and biotic communities that occur therein.

ARTERIAL ROADS - Roads comprising the basic access network for National Forest System administrative and management activities. These roads serve all resource elements to a substantial extent, and maintenance is not normally determined by the activities of any one element. They provide service to large land areas and usually connect with public highways or areas, or other Forest arterial roads to form an integrated network of primary travel routes. The location and standard are often determined by a demand for maximum mobility and travel efficiency rather than by a specific resource management service. Usually, they are developed and operated for long-term land and resource management purposes and constant service.

AVAILABLE FOREST LAND - Land which has not been legislatively withdrawn or administratively withdrawn by the Secretary of Agriculture or Forest Service Chief from timber production.

BACKGROUND - The distant part of landscape, picture, etc.; surroundings, especially those behind something and providing harmony or contrast; surrounding area or surface. Area located from 3 to 5 miles to infinity from the viewer.

BASAL AREA - The area of the cross-section of a tree stem near the base, generally at breast height and inclusive of bark.

BASE SALE SCHEDULE - A timber sale schedule formulated on the basis that the quantity of timber planned for sale and harvest for any future decade is equal to or greater than the planned sale and harvest for the preceding decade, and this planned sale and harvest for any decade is not greater than the long-term sustained yield capacity. (This definition expresses the principle of nondeclining flow.)

BENCHMARK - Reference points that define the bounds within which feasible management alternatives can be developed. Benchmarks may be defined by resource output or economic measures.

BENEFIT - The total value of an output or other effect.

BENEFIT/COST RATIO (BCR) - The total discounted benefits of an activity divided by the total discounted costs.

BEST AVAILABLE CONTROL TECHNOLOGY (BACT) - An emission limitation based on the maximum degree of reduction of each pollutant emitted from, or which results from any emitting installation, taking into account energy, environmental economic impacts, and other costs, and achievable for such installation through application of production processes and available methods, systems, and techniques.

BEST MANAGEMENT PRACTICE (BMP) - A practice or combination of practices that are the most effective and practical (including technological, economical, and institutional) consideration level compatible with water quality goals.

BIG-GAME WINTER RANGE - The area available to and used by big game through the winter season.

BIOLOGICAL CONDITION INDEX (BCI) - An expression of actual condition of a stream compared to its natural potential. It is measured by comparing actual chemical and physical characteristics of a stream with its potential.

BIOLOGICAL POTENTIAL - The possible output of a given resource limited only by its inherent physical and biological characteristics.

BOARD FEET - The amount of wood equivalent to a piece of wood one foot by one foot by one inch thick.

BROWSE - Twigs, leaves, and young shoots of trees and shrubs on which animals feed; in particular, those shrubs which are utilized by big-game animals for food.

CABLE LOGGING - A method for transporting logs from stumps to collecting points which utilize a cable system as the main device for moving them.

CAPABLE LANDS - Those portions of the Forest that have an inherent ability to support trees for timber harvest and produce at least 20 cubic feet/acre/year of wood fiber.

CARRYING CAPACITY - The number of organisms of a given species and quality that can survive in, without causing deterioration of, a given ecosystem through the least favorable environmental conditions that occur within a stated interval of time.

CAVITY NESTER - Wildlife species that nest in cavities (hollows excavated in snags by birds).

CHAINING - The dragging of an anchor chain between two tractors for the purpose of uprooting trees.

CLEARCUTTING - The cutting method that describes the silviculture system in which the old crop is cleared over a considerable area at one time. Regeneration then occurs from (a) natural seeding from adjacent stands, (b) seed contained in the slash or logging debris, (c) advance growth, or (d) planting or direct seeding. An even-aged forest usually results.

CLEARING INDEX - A determining factor in granting permission for certain classes of open burning. It is directly related to atmospheric stability and indicates periods of increased potential for pollutant increase.

CLIMAX - The culminating stage in plant succession for a given site where the vegetation has reached an highly stable condition.

CLOSED ROAD - Forest road on which all motorized vehicle use is prohibited, except by permit, under the authority of 36 CFR 261.

CODE OF FEDERAL REGULATIONS (CFR) - Document published by the Office of the Federal Register, National Archives and Records Service, that codify documents regulating application and administration of laws enacted by the Congress of the United States.

COLLECTOR ROADS - Roads constructed to serve two or more elements but which do not fit into the other two categories (arterial or local). Construction costs of these facilities are prorated to the respective element served. These roads serve smaller land areas and are usually connected to a Forest arterial or public highway. They collect traffic from Forest roads or terminal facilities. The location and standard are influenced by both long-term multi-resource service needs and travel efficiency. Forest collector roads are operated for constant service.

COMMERCIAL THINNING - Reduction in tree density by designating select trees for removal through commercial sales for poles, posts, fuelwood, et. al.

CONFINEMENT - To restrict the fire within determined boundaries established either prior to the fire, during the fire, or in an escaped fire situation analysis. The normal tactic is surveillance only.

CONIFER - Cone-bearing trees, mostly evergreen, including the pine, spruce, fir, etc.

CONSERVATION POOL - The minimum amount of water in a reservoir which will provide sufficient habitat to maintain fish over the winter period.

CONSUMPTIVE USE - A use of resources that reduces the supply, such as logging and mining, See also "Nonconsumptive use."

CONSTANT SERVICE FACILITY - A long-term facility developed and operated for continuous or annual recurrent service. (FSM 7705.31)

CONSTRAINT - A quantification of the minimum or maximum amount of an output or cost that could be produced or incurred in a given time period.

CONTAINMENT - To surround a fire, and any spot fires therefrom, with control line, as needed, which can reasonably be expected to check the fire's spread under prevailing and predicted conditions. The normal tactic is indirect attack and burn to human-made or natural barrier with little or no mop-up.

CONTROL - To complete the control line around a fire, any spot fires therefrom, and any interior islands to be saved, burn out any unburned area adjacent to the fire side of the control line, and cool down all hot spots that are immediate threats to the control line, until the line can reasonably be expected to hold under foreseeable conditions. The normal tactic is direct attack on the fire, if possible, and mop-up.

CORRIDOR - A linear strip of land identified for the present or future location of transportation or utility rights-of-way within its boundaries.

COST-EFFICIENCY - The usefulness of specified inputs (costs) to produce specified outputs (benefits). In measuring cost efficiency, some outputs, including environmental, economic, or social impacts, are not assigned monetary values but are achieved at specified levels in the least cost manner. Cost efficiency is usually measured using present net value, although use of benefit-cost ratios and rates-of-return may be appropriate.

CUBIC FOOT - The amount of timber equivalent to a piece of wood one foot by one foot.

CULMINATION OF MEAN ANNUAL INCREMENT - The point where the mean annual growth increment (the basal area of a stand of trees divided by their age) ceases to increase prior to decline.

CULTURAL RESOURCE - The remains of sites, structures, or objects used by humans in the past--historical or archaeological.

CULTURAL UNIT - A unique archaeological evidence found on archaeological sites that represent a distinct period of time or cultural activity.

Diameter at breast height (DBH) - The diameter of a tree measured 4 feet 6 inches above the ground.

DECIDUOUS - Trees or shrubs that shed leaves annually.

DECISION CRITERIA - Essentially the rules or standards used to evaluate alternatives. They are measurements or indicators that are designed to assist a decisionmaker to identify a preferred choice from the array of possible alternatives.

DEER NUMBER - The actual number of deer, as determined by a count.

DEER YEAR - The amount of forage habitat required by one deer for one year.

DEMAND - The quantity of goods or services called for at various prices, holding other factors constant.

DEPARTURE - The temporary deviation from the non-declining even-flow policy.

DESIGN CAPACITY - The maximum theoretical amount of use a developed recreation site was built to accommodate.

DESIGNATED CORRIDOR - A linear area of land with defined and recognized boundaries identified and designated by legal public notice.

DEVELOPED RECREATION - Recreation that requires facilities that, in turn, result in concentrated use of an area. Examples of recreation areas are campgrounds and ski areas; facilities in these areas might include roads, parking lots, picnic tables, toilets, drinking water, ski lifts, and buildings.

DEVELOPED RECREATION SITE - Relatively small, distinctly defined area where facilities are provided for concentrated public use; e.g., campgrounds, picnic areas, swimming areas.

DEWATERING - Remove most or all of the water from a stream channel; usually by a diversion for irrigation or power generation.

DISPERSED RECREATION - A general term referring to recreation use outside a developed recreation site; this includes activities such as scenic driving, hunting, backpacking, and recreation in primitive environments.

DISTANCE ZONE - Areas of landscape denoted by specified distances from the observer. Used as a frame of reference in which to discuss landscape characteristics or activities of man.

DIVERSITY - The distribution and abundance of different plant and animal communities and species within the area covered by a land and resource management plan. See also "Edge."

DIVERSITY INDEX (DAT) - A diversity index for macroinvertebrates which combines dominance (D) and number of taxa (T) (species).

DOUBLE CIRCUITING - Doubling the capacity of an electrical transmission line.

EARLY SERAL VEGETATION - One of the first stages that occur in vegetation community succession.

ECOLOGICAL TREND - The direction of change in vegetation condition or composition.

ECOSYSTEMS - An interacting system of organisms considered together with their environment; for example, marsh, watershed, and lake ecosystems.

EDGE - Where plant communities meet or where successional stages or vegetation conditions within the plant communities come together.

ELECTRONIC SITES - Areas designated for the operation of equipment which transmit and receive radio

signals, excluding television aerials and antennas, for local pickup of programming and passive reflectors.

ELK NUMBER - The actual number of elk, as determined by a count.

ELK YEAR - The amount of forage and habitat required by one elk for one year.

EMERGING PUBLIC ISSUE - An expressed demand or impact on Forest Service resources or management created by the public.

ENDEMIC - Native or confined to a certain region; having comparatively restricted distribution.

ENVIRONMENTAL ASSESSMENT (EA) - The concise public document required by the regulations for implementing the procedural requirements of NEPA (40 CFR 1508.9).

ESCAPED FIRE STATION ANALYSIS - A decision analysis using those factors influencing suppression of an escaped fire from which a plan of action will be developed. The analysis includes the development of alternative suppression strategies and the probable cost and damages associated with each.

EVEN-AGED- MANAGEMENT - The application of a combination of actions that results in the creation of stands in which trees of essentially the same age grow together. Managed even-aged forests are characterized by a distribution of stands of varying ages (and, therefore, tree sizes) throughout the forest area. The difference in age between trees forming the main canopy level of a stand usually does not exceed 20 percent of the age of the stand at harvest rotation age. Regeneration in a particular stand is obtained during a short period at or near the time that a stand has reached the desired age or size for regeneration and is harvested. Clearcut, shelterwood, or seed tree cutting methods produce even-aged stands.

EVEN-AGED SILVICULTURE - The combination of timber management actions that result in the creation of stands where trees of essentially the same age grow together.

EXISTING PUBLIC ISSUE - An expressed demand or impact on Forest Service resources or management created by the public.

EXPERIENCE LEVELS - The range of opportunities for satisfying basic recreation needs of people. A scale of five experience levels ranging from "primitive" to "urban" is planned for the National Forest System.

FACILITIES - Transportation planning, road management and operation, fleet equipment, and engineering services (for example, administrative buildings, water and sanitation systems, sanitary landfills, dams, bridges, and communication systems).

FAMILY UNIT - A developed site or picnic spot with table, fireplace, tent pad, and parking spot designed to handle a group of people.

FEE SITE - A Forest Service recreation area in which users must pay a fee. Fee sites must meet certain standards and provide certain facilities as specified in the Forest Service Manual.

FIRE HAZARD - The fuel in which a fire will ignite and burn.

E-6

FIRE INTENSITY LEVEL - The severity of a given fire condition. Low intensity fire flame lengths are under 4 feet and high intensity fires average flame lengths over 4 feet.

FIRE MANAGEMENT - All activities required for protection of resources from fire and the use of fire to meet land management goals and objectives.

FIRE MANAGEMENT/EFFECTIVENESS INDEX (FMEI) - The index value measures effectiveness of annual fire management operational programs. It is a planning, attainment, analysis, and evaluation tool for both annual and long-term programs. Measured in dollars per thousand acres protected, the objective is to minimize the index level.

FORAGE - All browse and nonwoody plants that are available to wildlife for grazing or harvested for feeding.

FORB - Any herbaceous plant other than grass or grass-like plants.

FOREGROUND - The detailed landscape found within 0 to 1/4-1/2 mile from the observer.

FOREST DEVELOPMENT ROADS - Roads that are part of the Forest development transportation system which includes existing and planned roads as well as other special and terminal facilities designated as Forest development transportation facilities. (See arterial roads, collector roads, and local roads.)

FOREST RANGER - The official responsible for administering the National Forest System lands in a Forest Service administrative unit called the Ranger District, located on a National Forest. The Forest Ranger reports to the Forest Supervisor.

FOREST ROAD OR TRAIL - The term "Forest road or trail" means a road or trail wholly or partly within, or adjacent to, and serving the National Forest System and which is necessary for the protection, administration, and utilization of the National Forest System and the use and development of its resources. (Title 23 USC 101 as amended by the Surface Transportation Act of 1978.)

FOREST SERVICE HANDBOOK (FSH) - The Forest Service Handbooks complement the Forest Service Manual. They are the principal source of detailed instructions for performing specialized tasks and contain detailed procedures, standards, practices, and techniques used primarily by technicians and specialists.

FOREST SERVICE MANUAL (FSM) - The Forest Service Manual is the basic and ruling component of the directive system and the principal source of continuing instruction for the conduct of Forest Service programs and activities.

FUEL BREAK - A zone in which fuel quantity has been reduced or altered to provide a position for suppression forces to make a stand against wildfire. Fuel breaks are designated or constructed before the outbreak of a fire. Fuel breaks may consist of one or a combination of the following: natural barriers, constructed fuel breaks, manmade barriers.

FUEL LOADING - The volume of dead and down vegetative material, that may include logging slash, subject to burning. Measured in tons per acre.

FUEL TREATMENT - The rearrangement or disposal of natural or activity fuels to reduce the fire hazard. Fuels are defined as both living and dead vegetative materials consumable by fire.

FUELWOOD - Wood-round, split, or sawed, and generally otherwise refuse material-cut into short lengths for burning.

FUGITIVE DUST - Solid, airborne particulate matter emitted from any source other than through a stack.

FULL SERVICE MANAGEMENT - Refers to recreation management, operation, maintenance, and administrative activities are accomplished according to established standards and objectives.

GENERAL AQUATIC WILDLIFE SYSTEMS (GAWS) - Intermountain Region standard aquatic inventory system which encompasses the following elements: Stream and lake identification, stream survey, lake-reservoir survey, macroinvertebrates survey, valley bottomland stratification, computer data management, action programs.

GOAL - A concise statement that describes a desired condition to be achieved sometime in the future. It is normally expressed in broad, general terms and is timeless in that it has no specific date by which it is to be completed. Goal statements form the principal basis from which objectives are developed.

GRAZING ALLOTMENT - See "Range Allotment."

GRAZING CAPACITY - The expected sustained annual production of forage that is suitable and available for livestock and/or wildlife can be grazed without inducing damage to vegetation, soils, and other related resources.

HABITAT - The place where a plant or animal naturally lives or grows.

HABITAT CAPABILITY - The estimated ability of an area, given existing or predicted habitat conditions, to support a wildlife, fish or plant population. It is measured in terms of potential population numbers.

HABITAT CONDITION INDEX (HCI) - An Indication of the condition of aquatic (stream) habitat based on the parameters of pool quantity, pool structure, stream bottom quality, streambank cover, and channel stability.

HIGHWAY - A Forest road under the jurisdiction of, and maintained by, a public authority and open to public travel. Designated as a Forest Highway, and meets the criteria of (1) jurisdiction, (2) providing a connecting link for the resources of the National Forests to other markets, and (3) serving other local needs such as schools, mail delivery, and commercial supply.

HUMAN RESOURCE UNIT (HRU) - A subunit of the larger SRU used for the same planning purposes, but focuses on a more site specific forest and district level.

INDICATOR SPECIES - A plant or animal species adapted to a particular kind of environment. Its presence is sufficient indication that specific habitat conditions are also present.

INSTREAM FLOWS - A prescribed level (or levels) of streamflow, usually expressed as a stipulation in a permit authorizing a dam or water diversion for the purpose of meeting National Forest System management objectives.

INTEGRATED PEST MANAGEMENT - A management strategy for suppression of forest pests which integrates silvicultural, mechanical, biological, and chemical suppression strategies which achieve greater efficiency and safety than the same strategies used alone.

E-8

INTERMEDIATE CUTTING - Any removal of trees from a stand between the time of its formation and the regeneration cut. Most commonly applied intermediate cuttings are release, thinning, improvement, and salvage.

INTERMITTENT SERVICE FACILITY - A facility developed and operated for periodic service and closed for more than one year between periods of use. (FSM 7705.31.)

IRRETRIEVABLE - Applies to losses of production, harvest, or commitment of renewable natural resources. For example, some or all of the timber production from an area is irretrievably lost during the time an area is used as a winter sports site. If the use is changed, timber production can be resumed. The production lost is retrievable, but the action is not irreversible.

IRREVERSIBLE - Applies primarily to the use of nonrenewable resources, such as minerals or cultural resources, or to those factors that are renewable only over long time spans, such as soil productivity. Irreversible also includes loss of future options.

ISSUE - A point, matter, or question of public discussion or interest to be addressed or decided through the planning process.

KEY HABITAT - Key land areas used by wildlife for forage and reproduction.

LAND EXCHANGE - The conveyance of non-Federal land or interests in the United States in exchange for National Forest System land or interests in land.

LANDLINE - For Forest Plan purposes, National Forest property boundaries.

LATE SERAL VEGETATION - One of the last stages that occurs before climax in vegetation community succession.

LINEAR PROGRAMMING - A mathematical method used to determine the cost-effective allocation of limited resources between competing demands when both the objective; e.g., profit or cost, and the restrictions on its attainment are expressible as a system of linear equalities or inequalities; e.g., $y = x + bx$.

LOCAL ROADS - Roads constructed and maintained for, and frequented by, the activities of a given resource element. Some use may be made by other element activities, but normally maintenance is not affected by such use. These roads connect terminal facilities with Forest collector or Forest arterial roads or public highways. The location and standard are usually determined by the requirements of a specific resource activity rather than by travel efficiency. Forest local roads may be developed and operated for either constant or intermittent service, depending on land use and resource management objectives for the area served by the facility.

LONG-TERM SUSTAINED YIELD (LTSY) - In timber, the highest uniform wood yield from lands being managed for timber production that may be sustained under a specified management intensity consistent with multiple-use objectives.

MACROINVERTEBRATES - An aquatic insect, without a backbone, that can be seen with the naked eye in the advanced stages of development. The composition of the community is an indication of the quality of the aquatic habitat and reflects the condition of the entire drainage.

MAINTENANCE LEVEL - A formally established set of objectives which describes the conditions necessary to achieve the planned operations of a road. (FSH 7709.15.)

E-9

MANAGEMENT ACTION - Any activity undertaken as part of the administration of the Forest.

MANAGEMENT UNIT - An area of land with similar management goals and a common management prescription.

MANAGEMENT CONCERN - A concern, problem, or a condition which constrains the range of management practices identified by the Forest Service in the planning process.

MANAGEMENT REQUIREMENTS - A statement of multiple-use goals, other goals and objectives, and the associated management prescriptions, with Standards and Guidelines for attaining them.

MANAGEMENT INTENSITY - A management practice or combination of management practices and associated costs designed to obtain different levels of goods and services.

MANAGEMENT INDICATOR SPECIES (MIS) - A species selected because its population changes indicate effects of management activities on the plant and animal community. A species whose condition can be used to assess the impacts of management actions on a particular area.

MANAGEMENT OPPORTUNITY - A statement of general actions, measures, or treatments that address a public issue or management concern in a favorable way.

MANAGEMENT PRACTICE - A specific activity, measure, course of action, or treatment.

MANAGEMENT PRESCRIPTION - Management practices and intensity selected and scheduled for application on a specific area to attain multiple use and other goals and objectives.

MANAGEMENT STANDARDS & GUIDELINES - See Standards and Guidelines.

MATURE TIMBER - Trees that have attained full development, particularly height, and are in full seed production.

MANAGEMENT SYSTEM - The laws, regulations, and traditions within which Forest Service management decisions are made and implemented.

MARKET-VALUE OUTPUTS - Goods and services valued in terms of what people are willing to pay for them, as evidenced by market transactions.

MAXIMUM MODIFICATIONS - See "Visual Quality Objectives (VQO)".

MIDDLEGROUND - The space between the foreground and the background in a picture or landscape. The area located from 1/4-1/2 to 3 to 5 miles from the viewer.

MINIMUM VIABLE POPULATION - In wildlife, it is the number of animals of a given species that are needed to maintain that species in an area.

MINERALS, COMMON VARIETY (SALEABLE) - Deposits which, although they may have value for use in trade, manufacture, the sciences, or in the mechanical or ornamental arts, do not possess a distinct, specific economic value for such use over and above the normal uses of the general sum of such deposits. May include sand, stone, gravel, pumicite, cinders, pumice (except that occurring in pieces over 2 inches on a side), clay, and petrified wood.

E-10

MINERAL ENTRY WITHDRAWAL - The exclusion of the right of exclusive possession by the locator, or locatable mineral deposits and mineral development work on areas required for administrative sites by the Forest Service and other areas highly valued by the public. Public lands withdrawn from entry under the general mining laws and/or the mineral leasing laws.

MINERALS, LEASABLE - Coal, oil, gas, phosphate, sodium, potassium, oil shale, sulphur, and geothermal steam.

MINERALS, LOCATABLE - Those hardrock minerals which are mined and processed for the recovery of metals. May include certain nonmetallic minerals and uncommon varieties of mineral materials such as valuable and distinctive deposits of limestone or silica. May include any solid, natural inorganic substance occurring in the crust of the earth, except for the common varieties of minerals and leasable minerals.

MITIGATION - Actions to avoid, minimize, reduce, eliminate, or rectify the impact of a management practice.

MODIFICATION - See "Visual Quality Objective (VQO)".

MORTALITY - In trees, it relates to lost wood fiber and includes those commercial species, standing or down, that have died during a specified period, and were not cull trees at the time of death.

MOUNTAIN PINE BEETLE - A tiny black insect, ranging in size from 1/8 to 3/4 inch, that bores its way into the tree's cambium and cuts off its supply of food, thus killing the tree.

MULTIPLE USE - The management of all the various renewable surface resources of the National Forest System so that they are utilized in the combination that will best meet the needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; that some lands will be used for less than all of the resources; and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land with consideration being given to the relative values of the various resources, and not necessarily the combination that will give the greatest dollar return or the greatest unit output.

NATIONAL FOREST LAND AND RESOURCE MANAGEMENT PLAN - A Plan developed to meet the requirements of the Forest and Rangeland Renewable Resources Planning Act of 1974, as amended. It guides all natural resource management activities and establishes management standards and guidelines for the National Forest System lands of a given National Forest.

NATIONAL FOREST LANDSCAPE MANAGEMENT SYSTEM - The art and science of planning and administering the use of Forest lands in such ways that the visual effects maintain or upgrade man's psychological welfare. It is the planning and design of the visual aspects of multiple-use land management.

NATIONAL FOREST MANAGEMENT ACT (NFMA) - A law passed in 1976 as an amendment to the Forest and Rangeland Renewable Resources Planning Act requiring the preparation of Regional Guides and Forest Plans and the preparation of regulations to guide that development.

NATIONAL FOREST SYSTEM (NFS) LANDS - National Forests, National Grasslands, or purchase units, and other lands under the management of the Forest Service, including experimental areas and Bankhead-Jones Title III lands.

NATIONAL RECREATION TRAILS - Trails designated by the Secretary of the Interior or the Secretary of Agriculture as part of the National system of trails authorized by the National Trails System Act. National Recreation Trails provide a variety of outdoor recreation uses in or reasonably accessible to urban

areas.

NATIONAL REGISTER OF HISTORIC PLACES - A listing (maintained by the U.S. National Park Service) of areas which have been designated as being of historic significance. The Register includes places of local and state significance as well as those of value to the Nation.

NATIONAL WILDERNESS PRESERVATION SYSTEM - All lands covered by the Wilderness Act and subsequent wilderness designations, irrespective of the department having jurisdiction.

NET PUBLIC BENEFITS - An expression used to signify the overall long-term value to the nation of all outputs and positive effects (benefits) less all associated inputs and negative effects (costs) whether they can be quantitative values or not. Net public benefits are measured by both quantitative and qualitative criteria rather than a single measure or index. The maximization of net public benefits to be derived from management of units of the National Forest System is consistent with the principles of multiple use and sustained yield.

NETWORK - A group of individuals that form a system for maintaining or activating their interests-including both informal and formal groups.

NON-CONSUMPTIVE USE- A use of a resource that does not reduce the existing inventory or supply.

NON-DECLINING EVEN-FLOW POLICY - A level of timber production that schedules sale and harvest in future decades equal to or greater than the present decade.

NON-MARKET VALUED OUTPUTS - Goods and services not generally traded in the marketplace, but valued in terms of what reasonable people would be willing to pay for them rather than go without. Those obtaining the outputs do not pay all or part of what they would be willing to.

NON-SYSTEM ROAD - Travelways through the Forest that are not included on the Forest road inventory, are not maintained, and are generally jeep trails or tracks that developed through use.

NOXIOUS WEEDS - A plant species that is undesirable; conflicts, restricts, or otherwise causes problems with the management objectives.

OBJECTIVE - A concise, time-specific statement of measurable planned results that respond to preestablished goals. An objective forms the basis for further planning to define the precise steps to be taken and the resources to be used in achieving identified goals.

OBLITERATION - The reclamation of the land occupied by a facility for purposes other than transportation.

OCCUPANCY TRESPASS - The illegal occupation or possession of National Forest System land or property.

OFF-ROAD VEHICLES (ORV) - Vehicles such as motorcycles, all-terrain vehicles, four-wheel drive vehicles, and snowmobiles.

OLD GROWTH - A stand of trees that is past full maturity and showing decadence; the last stage in forest succession.

OPEN ROAD - Forest road under the jurisdiction of the Forest Service on which all types of legal

motorized vehicles may be allowed to operate, and for which no restriction or closures has been issued under the authority of 36 CFR 261.

OPERATING PLAN - A written document approved by the Forest Supervisor which provides specifically, at the project level, for implementation of the management direction established in the Forest Plan.

OPPORTUNITY - See "Management Opportunity".

OPPORTUNITY COST - An opportunity cost is revenue foregone. In this analysis it is a cost calculated as the difference between present net value of the alternatives and the present net value of the maximum PNV benchmark.

OUTPUTS - The goods, services, products, and concerns which are measurable and capable of being used to determine the effectiveness of programs and activities in meeting objectives. Goods, end products, or services that are purchased, consumed, or utilized directly by people. A broad term for describing any result, product, or service that a process or activity actually produces.

OVERMATURE TIMBER - Trees that have attained full development, particularly in height, and are declining in vigor, health, and soundness.

PARTIAL RETENTION - See "Visual Quality Objectives (VQO)".

PERMITTED USE (OBLIGATION) - Includes use by all livestock authorized to graze on National Forest System lands under grazing or livestock use permits including those livestock under temporary nonuse for personal or range resource protection purposes.

PERSONS-AT-ONE-TIME (PAOT) - A recreation capacity measurement term indicating the number of people who can use a facility or area at one time.

PLANNED IGNITIONS - A fire started by a deliberate management action.

PLANNING HORIZON - The planning horizon is 50 years for all resources except timber, which is 150 years. The 50-year horizon is divided into three periods. The first and second periods are 10 years each, and the third period is 30 years.

POLE TIMBER - Live trees of at least five inches in diameter at breast height, but smaller than the minimum utilization standard for sawtimber.

POLICY - A guiding principle which is based on a specific decision or set of decisions.

PRECOMMERCIAL THINNING - The practice of removing some of the trees less than merchantable size from a stand so that the remaining trees will grow faster.

PREDATOR - One that preys, destroys, or devours--usually an animal that lives by preying on other animals.

PRESCRIBED FIRE - A wildland fire burning under specified conditions which will accomplish certain planned objectives. The fire may result from either planned or unplanned ignitions. Plans for use of unplanned ignitions for this purpose must be approved by the Regional Forester.

PRESCRIPTION - A predesignated set of criteria established for the use of prescribed fire to accomplish specific land and resource management objectives. See "Management Prescription."

PRESENT NET VALUE (PNV) - The difference between the discounted benefits and the discounted costs over a given time period.

PRESENT VALUE COST (PVC) - The sum of each year's costs, discounted to the present.

PRESENT VALUE BENEFIT (PVB) - The sum of each year's benefit values, discounted to the present.

PRESERVATION - See "Visual Quality Objective (VQO)".

PRIMITIVE ROADS - Roads constructed with no regard for grade control or designed drainage, sometimes by merely repeatedly driving over an area. These roads are single lane, usually with native surfacing and sometimes passable with four-wheel drive vehicles only, especially in wet weather.

PRIMITIVE ROS CLASS - A classification of the recreation opportunity spectrum characterized by an essentially unmodified environment, where trails may be present but structures are rare, and where probability of isolation from the sights and sounds of man is extremely high.

PROGRAM BUDGET - The fiscal planning document for estimating short- and long-range dollar needs by program area.

PROGRAM DEVELOPMENT AND BUDGETING (PD&B) - The process by which activities for the Forest are proposed and funded.

PROGRAMMED HARVEST - The part of the potential yield that is scheduled for harvesting. It is based on current demand, funding, and multiple use considerations.

PROJECTS - Work schedule prescribed for a project area to accomplish management prescriptions. Projects can be for operation, maintenance, and protection (OMP) or for investment purposes. OMP projects are for ongoing work and are generally considered one year at a time. Investments can be of multiyear duration. A project is organized for managerial convenience, and is described by location, activities, outputs, effects, work force, dollars, time, and responsibility for execution.

PUBLICS - A specific part of a population that can be grouped together by the resource manager because of some common interest or purpose.

PUBLIC ISSUE - A subject or question of widespread public interest relating to management of the National Forest System.

RANGE ALLOTMENT - An area designated for use of a prescribed number and kind of livestock under one management plan.

RANGE CONDITION - The state of health of the range based on what it is naturally capable of producing.

RAPTORS - Bird of prey with a strong notched beak and sharp talons, such as the eagle, hawk, owl, etc.

REAL DOLLAR VALUE - A monetary value that compensates for the effects of inflation.

RECREATION CAPACITY - The number of people, measured in persons-at-one-time (PAOT), that can take advantage of the recreation opportunity at any one time without substantially diminishing the quality of the experience sought after.

RECREATION EXPERIENCE DEVELOPMENT LEVEL - A classification (using a 1 to 5 scale) of the level of development in camp and picnic sites as to the types of recreation opportunities and modifications to the environment that can be expected.

RECREATION INFORMATION MANAGEMENT (RIM) - The Forest Service system for recording recreation facility condition and use.

RECREATION MANAGEMENT AREA - An area of several thousand acres where the management emphasis is on recreation and where there is direction given to establish a Recreation Area Management Plan.

RECREATION OPPORTUNITY - Availability of a real choice for a user to participate in a preferred activity within a preferred setting, in order to realize those satisfying experiences which are desired.

RECREATION OPPORTUNITY SPECTRUM (ROS) - A method of measuring the ability of the Forest land to meet the various types of demands imposed by a variety of recreation uses.

RECREATION RESIDENCES - Houses or cabins on National Forest System land that are not the primary residence of the owner.

RECREATION VISITOR DAY (RVD) - Twelve visitor hours, which may be aggregated continuously, intermittently, or simultaneously by one or more persons.

RECREATION LIVESTOCK - Animals used primarily in conjunction with recreation such as horses, mules, etc.

REDUCED SERVICE MANAGEMENT (RSM) - Management of recreation facilities below optimum maintenance standards.

REFORESTATION - The natural or artificial restocking of an area with forest trees.

REFORESTATION BACKLOG - Areas that need to have trees reestablished. This can be done by planting, seeding, or preparing the site for natural regeneration.

REGION - For Regional planning purposes, the standard administrative Region of the Forest Service, administered by the official responsible for preparing a Regional Guide.

REGIONAL GUIDE - The guide developed to meet the requirements of the Forest and Rangeland Renewable Resources Planning Act of 1974, as amended, that guides all natural resource management activities and establishes management standards and guidelines for the National Forest System lands of a given Region. It also disaggregates the RPA objectives assigned to the Region to the Forests within that Region.

REGULATED FOREST - A forest having an ideal distribution of age classes and where control of timber harvest is in accordance with tree growth and other management decisions.

REMOVAL CUT (FINAL CUT) - The removal of the last seed bearers or shelter trees after regeneration is established under a shelterwood method.

RESEARCH NATURAL AREAS (RNA) - An area in as near a natural condition which exemplifies typical or unique vegetation and associated biotic, soil, geologic, and aquatic features. The area is set aside to preserve a representative sample of an ecological community primarily for scientific and educational purposes; commercial and general public use is not allowed.

RESOURCE MANAGEMENT PLAN - A Plan developed prior to the Forest Plan that outlines the activities and projects for a particular resource element independently of considerations for other resources. Such Plans are superseded by the Forest Plan.

RESTRICTED ROAD - A Forest road on which motorized vehicle use is restricted as to times or seasons of use, types of vehicles, vehicle equipment, or type of activity specified in orders issued under the authority of 36 CFR 261.

RETENTION - See "Visual Quality Objectives (VQO)".

RIGHT-OF-WAY (ROW) - An accurately located strip of land with defined width, point of beginning, and point of ending. It is the area within which the user has authority to conduct operations approved or granted by the landowner in an authorizing document, such as a permit, easement, lease, license, or Memorandum of Understanding (MOU).

RIPARIAN - Areas of land that are directly influenced by water. They usually have visible vegetative or physical characteristics reflecting this water influence. Stream sides, lake borders, or marshes are typical riparian areas.

RIPARIAN AREAS - Streams, lakes, ponds, wetlands, floodplains, and their associated aquatic and riparian ecosystems.

RIPARIAN ECOSYSTEM - A transitional between the aquatic ecosystem and the adjacent upland terrestrial ecosystem and is identified by soil characteristics and distinctive vegetation communities that require free or unbounded water.

ROAD - A general term denoting a way for purposes of travel by vehicles greater than 40 inches in width. (FSM 7721.15c.)

ROAD MAINTENANCE LEVELS - Levels are described as follows:

Level 1 - Road normally closed to vehicle traffic.

Level 2 - Road open for limited passage of traffic but not normally suitable for passenger cars.

Level 3 - Road open for public traffic including passenger cars, but may not be smooth or comfortable.

Level 4 - Road suitable for all types of vehicles, generally smooth to travel, and dust may be controlled.

Level 5 - Road is smooth and dust free, and the surface is skid resistant if paved.

ROADED NATURAL - A classification of the recreation opportunity spectrum that characterizes a predominately natural environment with evidence of moderate permanent alternate resources and resource utilization. Evidence of the sights and sounds of man is moderate, but in harmony with the natural environment. Opportunities exist for both social interaction and moderate isolation from sights and sounds

of man.

E-16

ROADLESS AREA REVIEW AND EVALUATION II (RARE II) - The national inventory of roadless and undeveloped areas within the National Forest and Grasslands. This refers to the second such assessment, which was documented in the Final Environmental Impact Statement of the Roadless Area Review and Evaluation, January 1979.

ROTATION - The planned number of years between the formation of a regeneration of trees and its final cutting at a specified stage of maturity.

ROUNDWOOD - Timber and fuelwood prepared in the round state-from felled trees to material trimmed, barked, and crosscut (logs, transmission poles, etc.).

RPA PROGRAM - The Forest and Rangeland Renewable Resources Planning Act of 1974. Also refers to the National Assessment and Recommended Program developed to fulfill the requirements of the Act. The most recent recommended program was done in 1980.

RURAL - A recreation opportunity spectrum classification for areas characterized by a substantially modified natural environment. Sights and sounds of man are evident. Renewable resource modification and utilization practices enhance specific recreation activities or provide soil and vegetative cover protection.

SAPLING - As used in timber survey, a size class definition; trees 1.0 to 4.9 inches at DBH.

SAWTIMBER - Live trees that equal or exceed the minimum utilization standards.

SEASONAL FACILITY - A facility which can be operated only as climatic conditions and structural and administrative limitations allow. The facility may be closed at times during the normal operating year to all or certain classes of use for reasons of weather, fire hazard, resource protection, or public safety. (FSM 7705.52.)

SEDIMENTARY ROCKS - Rocks formed by the accumulation and settling of suspended solid materials in water or from air. A characteristic feature of these rocks is a layered structure.

SEED TREE CUTTING - Removal in one cut of the mature timber crop from an area, except for a small number of seed bearers left singly or in small groups.

SEEDLINGS - Live trees less than 5 inches in diameter at breast height.

SEMIPRIMITIVE MOTORIZED - A classification of the recreation opportunity spectrum characterized by a predominantly unmodified natural environment in a location that provides good to moderate isolation from sites and sounds of man except for facilities/travel routes sufficient to support motorized recreational travel opportunities which present at least moderate challenge, risk, and a high degree of skill testing.

SEMIPRIMITIVE NONMOTORIZED - A classification of the recreation opportunity spectrum characterized by a predominantly unmodified natural environment of a size and location that provides a good to moderate opportunity for isolation from sights and sounds of man. The area is large enough to permit overnight foot travel within the area, and presents opportunity for interaction with the natural environment with moderate challenge, risk, and use of a high degree of outdoor skills.

SENSITIVE SPECIES - Plant or animal species which are susceptible or vulnerable to activity impacts or habitat alterations.

E-17

SENSITIVITY LEVEL - A particular degree of measure of viewer interest in scenic qualities of the landscape. Three sensitivity levels are employed, each identifying a different level of user concern for the visual environment.

- Level 1 - Highest sensitivity
- Level 2 - Average sensitivity
- Level 3 - Lowest sensitivity

SERIAL CONDITION - The unique characteristics of a biotic community which is a developmental, transitory stage in an orderly ecologic succession involving changes in species, structure, and community processes with time.

SHEET EROSION - The removal of a fairly uniform layer of soil from the land surface by runoff water, without the development of conspicuous water channels.

SHELTERWOOD - The cutting method that describes the silvicultural system in which, in order to provide a source of seed and/or protection for regeneration, the old crop (the shelterwood) is removed in two or more successive shelterwood cuttings. The first cutting is ordinarily the seed cutting, though it may be preceded by a preparatory cutting, and the last is the final cutting. Any intervening cuttings is termed removal cutting. An even-aged stand results.

SHORT-TERM FACILITY - A facility developed and operated for a limited period of time which will cease to exist as a transportation facility after the purpose for which it was constructed is completed, and the occupied land is reclaimed and managed for natural resource purposes. (FSM 7705.32.)

SILVICULTURAL SYSTEM - A management process whereby Forest are tended, harvested, and replaced resulting in a Forest of distinctive form. Systems are classified according to the method of carrying out the fellings that remove the mature crop and provide for regeneration and according to the type of Forest thereby produced.

(SINGLE) TREE SELECTION - The cutting method that describes the silvicultural system in which trees are removed individually, here and there, each year over an entire forest or stand. The resultant stand usually regenerates naturally and becomes all-aged.

SINGLE-STORIED STANDS - A stand of trees in which the canopy is contained in one layer.

SITE INDEX - A numerical evaluation of the quality of land for plant productivity.

SLASH - The residue left on the ground after timber cutting and/or accumulating there as a result of storm, fire, or other damage. It includes unused logs, uprooted stumps, broken or uprooted stems, branches, twigs, leaves, bark, and chips.

SNAG - A nonliving standing tree. The interior of the snag may be sound or rotted.

SOCIAL IMPACT ANALYSIS - A social assessment process that establishes the cultural and economic

conditions, and the physical resource inventory of a specific geographic area, in order to forecast and control disruptive changes resulting from forest resource management activities.

SOCIAL RESOURCE UNIT (SRU) - An SRU is a geographic area tied together by a common physical, social, and economic environment. The SRU concept provides resource managers with a defined geographic unit of analysis that shows the relationship between physical and human resources. The SRU is used as a planning and implementation tool for forecasting and managing the social impacts resulting from changes in resource use on a Regional level.

E-18

SOIL EROSION - The detachment and movement of soil from the land surface by water or wind.

SOIL PRODUCTIVITY - The capacity of a soil to produce a specific crop such as fiber, forage, etc., under defined levels of management. Productivity is generally dependent on available soil moisture and nutrients and length of growing season.

SPECIAL USE PERMIT - A permit issued under established laws and regulations to an individual, organization, or company for occupancy or use of National Forest System land for some special purpose.

SPECIFIED ROAD - A road, including related transportation facilities and appurtenances, shown on Sale Area Map and listed in Table A9 of the Timber Sale Contract. (B5.2 TS Contract and FSM 2431.24--5&6.)

STAND (TREE STAND) - An aggregation of trees or other vegetation occupying a specific area and sufficiently uniform in composition (species), age arrangement, and condition as to be distinguishable from the Forest or other vegetation or other land cover on adjoining areas.

STANDARD AND GUIDELINE - A principle requiring a specific level of attainment, a rule to measure against; a mandatory requirement.

SUBSIDENCE - Surface caving or distortion due to underground excavations.

SUCCESSIONAL STAGE - A stage or recognizable condition of a plant community that occurs during its development from bare ground to climax; for example, coniferous forests often progress through six recognized stages: grass-forb; shrub-seedling; pole-sapling; young; mature; old growth.

SUITABILITY - The appropriateness of applying certain resource management practices to a particular area of land, as determined by an analysis of the economic and environmental consequences and the alternative uses foregone. A unit of land may be suitable for a variety of individual or combined management practices. See also "Timber classification."

SUITABLE FOREST LAND - Lands allocated to timber management as a result of the three-stage suitability analysis.

SUPPRESSION - An act extinguishing or confining fire.

TARGETS - A quantifiable output. Assignments made to the Forest by the Regional Forester.

TECHNICALLY SUITABLE FOREST LAND - Land for which technology is available that will ensure timber production without irreversible resource damage to soils, productivity, or watershed conditions. There is reasonable assurance that such lands can be adequately restocked as provided in 36 CFR 219.13 (h)(3).

TEMPORARY ROAD - A road that will be physically obliterated and seeded after its primary use is

completed; i.e., spur road for logging. It will never be used again.

THERMAL COVER - Cover used by animals to ameliorate effects of weather; for elk, a stand of coniferous trees 40 feet or taller with an average crown closure of 70 percent or more.

THINNING - A felling made in an immature stand primarily to maintain or accelerate diameter increment and also to improve the average form of the remaining trees without permanently breaking the canopy. An intermediate cutting.

E-19

THREATENED SPECIES - Those plant or animal species likely to become endangered species throughout all or a significant portion of their range within the foreseeable future.

TIMBER CLASSIFICATION - Forested land is classified under each of the land management alternatives according to how it relates to the management of the timber resource. The following are definitions of timber classifications used for this purpose:

1. **Nonforest Land** - Lands never having or incapable of having greater than 10 percent of the area occupied by forest trees and lands formerly forested and currently developed for nonforest use.
2. **Forest Land** - Land at least 10 percent occupied by forest trees of any size or formerly having had such tree cover and not currently developed for nonforest use. Lands developed for nonforest use include areas for crops, improved pasture, residential, or administrative areas, improved roads of any width and adjoining road clearing and powerline clearing of any width. The term occupancy when used to define forest land will be measured by canopy cover of live forest trees at maturity. The minimum area for classification of forest land is one acre. Unimproved roads, trails, streams, and clearings in forest areas are classified as forest if they are less than 120 feet in width.
3. **Forest Land Suitable for Commercial Harvest** - Land that is managed for timber production on a regulated basis.
4. **Unsuitable Forest Land (Not Suited)** - Forest land that is not managed for timber production because: (1) the land has been withdrawn by Congress, Secretary, or Chief; (2) technology is not available to prevent irreversible damage to soils, productivity, or watershed conditions; (3) there is no reasonable assurance that lands can be adequately restocked within 5 years after final harvest based on existing technology and knowledge; (4) there is at present, a lack of adequate information to responses to timber management activities; or (5) timber management is inconsistent with or not cost-efficient in meeting the management requirements and multiple-use objectives specified in the Forest Plan.
5. **Tentatively Suitable (Commercial Forest Land)** - Forest land which is producing or is capable of producing crops of industrial wood and (1) has not been withdrawn by Congress, the Secretary, or Chief; (2) existing technology and knowledge is available to ensure timber production without irreversible damage to soils, productivity, or watershed conditions; and (3) existing technology and knowledge provides reasonable assurance that adequate restocking can be attained within 5 years after final harvesting.

TIMBER STAND IMPROVEMENT (TSI) - Measure such as thinning, pruning, release cutting, prescribed fire, girdling, weeding, or poisoning of unwanted trees aimed at improving growing condition of the remaining trees.

TRACTOR LOGGING - Any logging method which uses a tractor as the motive power for transporting logs from the stumps to a collecting point--whether by dragging or carrying the logs.

TRADEOFF EVALUATION PROCESS (TEP) - A process whereby factors, issues, elements, etc., are evaluated with regard to the tradeoffs that would occur.

TRAIL MAINTENANCE LEVEL - Categories outlined in the Management Information Handbook describing the type and intensity of maintenance for trails.

E-20

TRANSITORY RANGE - Land that is suitable for grazing use of a nonenduring nature over a period of time. For example, on particularly disturbed lands, grass may cover the area for a period of time before being replaced by trees or shrubs not suitable for forage.

TRAVEL MANAGEMENT - The administrative decisions on the location and timing of road and trail closures.

TWO-STORIED STANDS - A stand of trees whose crown structure is divided into two distinct layers.

UNEVEN-AGED MANAGEMENT - The application of a combination of actions needed to simultaneously maintain continuous high-forest cover, recurring regeneration of desirable species, and the orderly growth and development of trees through a range of diameter or age classes to provide a sustained yield of forest products. Cutting is usually regulated by specifying the number or proportion of trees of particular sizes to retain within each area, thereby maintaining a planned distribution of size classes. Cutting methods that develop and maintain uneven-aged stands are single tree selection and group selection

UNIVERSAL SOIL LOSS EQUATION (USLE) - An empirical erosion model, originally designed for agricultural situations that computes long-term average soil losses from sheet and rill erosion under specific conditions. Recent research has provided methods so that USLE can also be used to estimate sheet and rill erosion for Forest Management activities.

UNPLANNED IGNITION - A fire started at random by either natural or human causes, or a deliberate incendiary fire.

UPRATING - Increasing the capacity of an existing electrical transmission system.

URBAN ROS CLASS - A classification of the Recreation Opportunity Spectrum in which the natural setting is dominated by man-made structures and the sights and sounds of man predominate.

UTILIZATION STANDARDS - Standards guiding the projection of timber yields and the use and removal of timber. The standards are described in terms of minimum diameter at breast height, minimum length, and percent soundness of the wood, as appropriate.

VARIETY CLASS - A classification system for establishing three visual landscape categories according to the relative importance of the visual features. This classification system is based on the premise that all landscapes have some visual values, but those with the most variety or diversity of visual features have the greatest potential for high scenic value.

VEGETATIVE MANIPULATION - The change of one vegetation type to another. It can be done by a tractor, chemicals, or fire. Usually, this is done to increase forage for livestock and can be a beneficial tool for wildlife.

VIALE POPULATIONS - A number of individuals of a species sufficient to ensure the long-term existence of the species in natural self-sustaining populations adequately distributed throughout their region.

VISUAL QUALITY OBJECTIVE (VQO) - Categories of acceptable landscape alteration measured in degrees of deviation from the natural appearing landscape.

Preservation (P) - A Visual Quality Objective that provides for ecological change only.

Partial Retention (PR) - A Visual Quality Objective which in general means man's activities may be evident but remain visually subordinate to the characteristic landscape.

E-21

Retention (R) - A Visual Quality Objective which in general means man's activities may not be evident and must remain subordinate to the characteristic landscape.

Modification (M) - A Visual Quality Objective meaning man's activity may dominate the characteristic landscape but must, at the same time, utilize naturally established form, line, color, and texture. It should appear as a natural occurrence when viewed in foreground or middleground.

Maximum Modification (MM) - A Visual Quality Objective meaning man's activity may dominate the characteristic landscape but should appear as a natural occurrence when viewed as background.

Enhancement (E) - A short-term management alternative which is done with the express purpose of increasing positive visual variety where little variety now exists.

Rehabilitation (R) - A short-term management alternative used to return existing visual impacts in the natural landscape to a desired visual quality.

VISUAL RESOURCE - The composite of basic terrain, geologic features, water features, vegetative patterns, and land use effects that typify a land unit and influence the visual appeal the unit may have for visitors.

WATERSHED - The entire area that contributes water to a drainage system or stream.

WHEELING - The use of a single electrical transmission system by more than one supplier.

WILDERNESS - Areas designated by congressional action under the 1964 Wilderness Act and the 1984 Utah Wilderness Act. Wilderness is defined as undeveloped Federal land retaining its primeval character and influence without permanent improvements or human habitation. Wilderness areas are protected and managed to preserve their natural conditions, which generally appear to have been affected primarily by the forces of nature with the imprint of man's activity substantially unnoticeable; have outstanding opportunities for solitude or a primitive and unconfined type of recreation; include at least 5,000 acres or is of sufficient size to make practical their preservation, enjoyment, and use in an unimpaired condition; and may contain features of scientific, educational, scenic, or historic value as well as ecologic and geologic interest.

WILDFIRE - Any wildland fire that is not a prescribed fire.

WILDLIFE AND FISH USER DAY (WFUD) - Twelve visitor hours which may be aggregated continuously, intermittently, or simultaneously by one or more persons.

WILDLIFE HABITAT DIVERSITY - The distribution and abundance of different plant and animal communities and species within a specific area.

WILDLIFE HABITAT EFFECTIVENESS - The character of locations where wildlife are not disturbed by human activities.

WINDOW - A critical segment of terrain through which right-of-way could pass in traversing from point of origin to destination.

WINTER RANGE - See "Big-Game Winter Range".

WITHDRAWAL - An order removing specific land areas from availability for certain uses.

E-22

WOOD FIBER PRODUCTION - The growing, tending, harvesting, and regeneration of harvestable trees.

WORK CENTER - A facility where crews assemble and are direct toward their various work assignments. A work center can be located at an administrative site. A work center normally will include storage and warehousing facilities and may include crew housing.

YEAR-ROUND ECONOMICS - Economies based on employees working year-round as opposed to seasonal employment.

YELLOW CAKE - The final precipitate formed in the milling process of uranium ore.

ZONE OF INFLUENCE (ZOI) - The area influenced by Forest Service management activities.

APPENDIX F

MAPS

Coal Multiple-Use Evaluation Areas	F-2
Corridor Evaluation; Manti and San Pitch Divisions	F-4
Corridor Evaluation; LaSal Division	F-6
Visual Quality Objective, Final Condition; Manti and San Pitch Divisions	See Map Packet
Visual Quality Objective, Final Condition; LaSal Division	See Map Packet
Recreation Opportunity Spectrum; Manti and San Pitch Division	See Map Packet
Recreation Opportunity Spectrum; LaSal Division	See Map Packet
Travel Map; Manti and San Pitch Division	See Map Packet
Travel Map; LaSal Division	See Map Packet
Forest Plan Map; Manti and San Pitch Divisions	See Map Packet
Forest Plan Map; LaSal Division	See Map Packet

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F-1

